# CVD Series Control Valve Diffuser

## Provides Up to 15 dBA Noise Attenuation for Natural Gas Control Valves and Regulators

### Description

The Control Valve Diffuser CVD is a noise attenuating device that is installed immediately downstream of any control valve or regulator to provide up to 15 dBA additional noise reduction. The CVD is available in a variety of configurations and designs to accommodate nearly any natural gas regulation facility. The CVD may be combined with other noise attenuating technologies to provide cumulative noise attenuation.

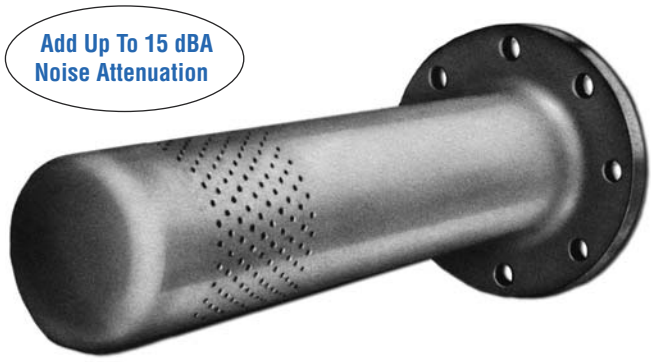



**Figure 1 -** CVD

The CVD may be designed for minimal pressure drop, allowing maximum flow capacity while providing necessary noise reduction. The CVD features a compact design which minimizes impact on station design.

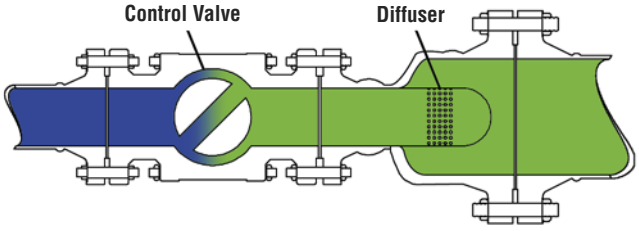



**Figure 2 -** Typical Installation of CVD

The CVD is installed immediately downstream of the control valve. This source attenuating device prevents harmful noise and vibration. The CVD provides moderate noise attenuation in a compact design.

### Features

- Reduces noise up to 15 dBA
- Minimal pressure drop and maximum flow capacity
- Effective over full range of flows and pressures
- Easily retrofit to existing Becker T-Ball™ and Globe Control Valves
- Easily retrofit to existing RedQ Flexflo® Regulators or other manufacturers' regulators
- Cost-effective noise reduction
- Zero maintenance and long life
- Slim design available to fit between control valve/regulator outlet flange and downstream pipe flange
- Custom engineering ensures minimal pressure drop resulting in maximum flow capacity
- Pressure equipment directive compliant under "SEP" parameters

### Usage

- All natural gas control valve applications
- All natural gas regulator applications
- May be specified for new regulation applications
- Easily retrofit to existing regulator stations to eliminate any noise problems
- Compact designs for retrofit with minimal piping alterations

### Compatibility

- Becker T-Ball™ Noise Attenuating Control Valves
- Becker Below Ground Regulator Concept
- Becker Globe Control Valves
- RedQ Flexflo® Regulators
- Other manufacturers' control valves and regulators

### Custom Acoustic Performance

Computer aided design allows infinite variations in the parameters of slot width and distribution. The optimum combination of these elements is selected to provide the required noise reduction.

### Custom Flow Performance

The CVD provides the exact amount of pressure drop required for each application:

- For high pressure and high noise applications, diffusers can be designed to efficiently share pressure drop with the control valve or regulator.
- For low pressure drop requirements, diffusers can be designed to minimize pressure loss through the regulator station.

## CVD Diffusers are Available in a Variety of Configurations to Perfectly Suit Application Needs

**Figure 3 -** Maximum Noise Attenuation Capabilities

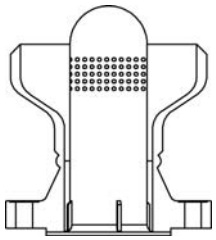


**Figure 3.1 -** GDS Model
Slim design allows close fit between pipe flanges when space is an issue.

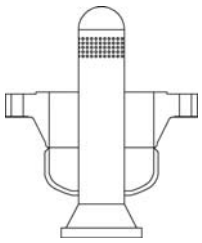


**Figure 3.2 -** GDI Model
Compact design allows partial insertion of diffuser into downstream pipe as well as a full variety of end connections.

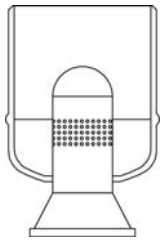


**Figure 3.3 -** GDV Model
Full design allows diffuser to be completely self-contained with a full variety of end connections.

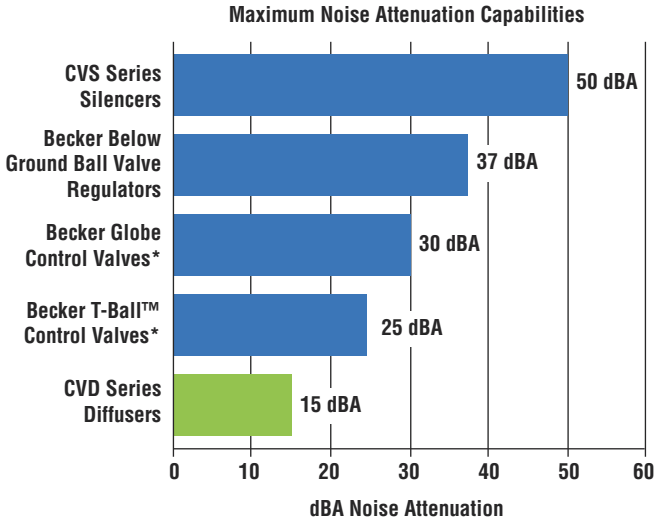
**Need More Attenuation?**
Becker offers a variety of noise attenuation products which can be utilized individually or combined for optimum noise attenuation. The CVD Series Diffuser may be combined with the following to meet the specific needs of your natural gas regulating station:

- Becker T-Ball™ Noise Attenuating Control Valves
- Becker Below Ground Regulator Concept
- Becker Globe Control Valves

**Table 1 -** CVD Specifications and Materials of Construction

| Specifications | |
|---|---|
| **Maximum Noise Attenuation** | 15 dBA |
| **Available Sizes** | 1" (25mm) - 48" (1220mm) Diameter Inlet/Outlet (nominal) |
| **ANSI Ranges** | 150 ANSI - 1500 ANSI |
| **Models** | Type GDS (slim design)<br>Type GDI (reduced length)<br>Type GDV (full length) |
| **End Connections** | RFFE<br>Weld<br>RTJ<br>Combination |
| **Manufacture Specifications** | ANSI B31.3 Piping Code<br>ASME VIII, Div. 1<br>Available to Pressure Equipment Directive Specifications (PED) |
| **Options** | Custom coatings<br>Various Testing |
| **Materials of Construction** | |
| **Shell** | Rolled carbon steel plate |
| **Head** | Carbon steel plate |
| **Diffuser** | Drilled carbon steel pipe (A-53 Grade B material or equivalent) |

**Figure 4 -** Maximum Noise Attenuation Capabilites for Different Products




* Based upon inclusion of maximum performance noise attenuation trim

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